

# Notice of Allowability

Application No.

10/714,655

Examiner

Nader Bolourchi

Applicant(s)

DUVAUT ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/31/2007.
2. ☒ The allowed claim(s) is/are 1 and 11-16, renumbered as 1, and 2-7, respectively.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☒ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
DAVID C. PAYNE

SUPERVISORY PATENT EXAMINER

## DETAILED ACTION

### *Remarks*

1. Applicant canceling claims 2-8 and 10 is acknowledged.
2. Applicant's amendment dated 10/31/2007 is entered.
3. Claims rejections under 35 USC § 102 are withdrawn.

### *Response to Arguments*

4. Applicant's arguments, see Remarks (page 9), filed 10/31/2007, with respect to claims 1 and 11-16 have been fully considered and are persuasive. The rejection of claims 1 and 11-16 has been withdrawn.

### *Allowable Subject Matter*

5. Claims 1 and 11-16 are allowed.
6. The following is an examiner's statement of reasons for allowance:

The prior arts of record fail to teach or suggest in combination, the steps of **“defining a candidate system to be implemented by an LDSL system, wherein defining a candidate system comprises defining a number of power spectral density (PSD) masks; optimizing criteria associated with the candidate system to create an optimized candidate system”**, in combination with

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selecting the optimized candidate system to implement in an LDSL system: wherein,  
one of the number of masks is defined by the following relations. wherein f is a  
frequency band in kHz and D is the value of the mask in dBm/Hz:

for  $0 < f \leq 4$ , then  $D = -97.5$ , with max power in the in 0-4 kHz band of +15 dBm;

for  $4 < f \leq 5$ , then  $D = -92.5 + 18.64 \log_2(f/4)$ ;

for  $5 < f \leq 5.25$ , then  $D = -86.5$ ; for  $5.25 < f \leq 16$ , then  $D = -86.5 + 15.25 \log_2(f/5.25)$ ;

for  $16 < f \leq 32$ , then  $D = -62 + 25.5 \log_2(f/16)$ ;

for  $32 < f \leq 138$ , then  $D = -36.5$ ; for  $138 < f \leq 323.4375$ , then  $D = -31.8$ ;

for  $323.4375 < f \leq 517.5$ , then  $D = -31.8 - 0.0371 \times (f - 323.4375)$ ;

for  $258.75 < f \leq 1800$ , then  $D = \max(-39 - 23.27 \times \log_2(f/517.5), -65)$ ;

for  $1800 < f \leq 2290$ , then  $D = -65 - 72 \times \log_2(f/1800)$ ;

for  $2290 < f \leq 3093$ , then  $D = -90$ ;

for  $3093 < f \leq 4545$ , then  $D = -90$  peak, with max power in the  $[f, f+1 \text{ MHz}]$  window of  $(-36.5 - 36 \times \log_2(f/1104) + 60) \text{ dBm}$ ; and

for  $4545 < f \leq 11\,040$ , then  $D = -90$  peak, with max power in the  $[f, f+1 \text{ MHz}]$  window of  $-50 \text{ dBm}$ .

in order to form "A METHOD FOR IMPLEMENTING SMART DIGITAL SUBSCRIBER LINE (DSL) FOR LONG REACH DIGITAL SUBSCRIBER LINE (LDSL) SYSTEMS", as recited in claim 1, and some variation of wording as recited in claims 11-16, correspondingly.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nader Bolourchi whose telephone number is (571) 272-8064. The examiner can normally be reached on M-F 8:30 to 4:30.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David. C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Nader Bolourchi

11/02/2007

  
DAVID C. PAYNE  
SUPERVISORY PATENT EXAMINER